AMENDMENTS TO THE CLAIMS

1. (Currently Amended) ~~Method~~ A method for deadlock free altering of a network routing in a network with flow control on the link level, said network routing is from a first routing function Rold, defining an established connection between a plurality of communication input ports Il,..,In and output ports Ol,..,Om, in a network element, to a second routing function Rnew, defining an new connection between the said input and output ports, for execution by the network element for transmitting and receiving data packets, said method comprising:

(1) for each input port Ii, performing the following steps:

(1a) applying the first routing function Rold for the input port,

(1b) receiving a token on an input port Ii,

(1c) applying the second routing function Rnew for the input port Ii ,

(1d) forwarding data packets to every output port Oj associated with the input port Ii according to the second routing function Rnew, provided that the output port Oj has transmitted the token,

(2) for each output port Oj, performing the following steps;

(2a) determining if the token has been received on all input ports associated with the output port Oj according to the first routing function Rold,

(2b) transmitting the token on the output port Oj when the token has been received on all said input ports.

2. (Currently Amended) The method ~~Method~~ according to claim 1, wherein the network element is a switch.

3. (Currently Amended) The method~~Method~~ according to claim 1 or 2, wherein the token is included in a data packet.

4. (Currently Amended) The method~~Method~~ according to claim 1, wherein the method is applied to deterministic routing functions.

5. (Currently Amended) The method~~Method~~ according to claim 1, wherein the method is applied to adaptive routing functions.

6. (Currently Amended) The method~~Method~~ according to claim 1, wherein the method is applied to source routing.

7. (Currently Amended) The method~~Method~~ according to claim 5, wherein if the adaptive method gives rise to a cyclic dependency graph, the graph is pruned into a non-cyclic one before the method is applied.

8. (Currently Amended) The method~~Method~~ according to claim 1, wherein the method is applied to only parts of a complete network.

9. (Currently Amended) A network~~Network~~ element, comprising

a plurality of output ports for transmitting data packets to other network elements in a network,

a plurality of input ports for receiving data packets from other network elements in the network,

a processing device,

a memory ,

characterized in that the processing device is arranged to perform a method according to claim 1.

10. (Currently Amended) The network ~~Network~~ element according to claim 9, wherein said routing functions are implemented as tables stored in said memory.

11. (Currently Amended) The network ~~Network~~ element according to one of the claims 9 or 10, wherein said memory comprises computer program instructions arranged to perform said method when executed by said processing device.

12. (Currently Amended) A computer ~~Computer~~ network system, comprising a number of network elements according to claim 9.

13. (Currently Amended) A computer~~Computer~~ program, embodied on a storage medium or in a memory, for execution by a processing device in a network element,

characterized in that the program comprises a set of instructions arranged to perform a method according to claim 1 when executed by the processing device in the network element.